WHAT THE F
WHAT SWearing REVEALS ABOUT OUR LANGUAGE, OUR BRAINS, AND OURSELVES
BENJAMIN K. BERGEN
THE WORST WORDS IN THE WORLD

nigger
cunt
fag
cocksucker
chink
motherfucker
buttfuck
bitch
retard
dyke
whore
pussy
slut
homo
fuck
shithead
lesbo
asshole
prick
queer
skank
spic
kike
cock
gook
twat
bastard
INCREASED HEART RATE

[Graph showing the change in heart rate (bpm) between nonswearing and swearing, with separate lines for males and females.]
Offensiveness of English Profanity

Religion Copulation Body (Functions) Slurs

nigger
cunt
fag
cocksucker
motherfucker
buttfuck
shithead
asshole
cunt
fag
chink
bitch

goddamn

Taboo Word Type

Offensiveness

Religion Copulation Body (Functions) Slurs
ENGLISH ORTHOGRAPHIC WORD LENGTH

Number of words

Word length (in letters)

Profanity
Whole language
## Syllable Structure

<table>
<thead>
<tr>
<th>Open (ends with V)</th>
<th>Closed (ends with C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>see</td>
<td>sass</td>
</tr>
<tr>
<td>spy</td>
<td>spit</td>
</tr>
<tr>
<td>rue</td>
<td>runt</td>
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</table>

Only $\approx 5\%$ of profane English monosyllabic words

And $\approx 95\%$ of profane English monosyllabic words
• Snowballing from a random seed?
• Non-childlike language?
• Suitability to the functions of profanity?

Why?

All English monosyllables
- non-stops 53%
- stops 47%

Profane English monosyllables
- non-stops 31%
- stops 69%
Some languages/cultures have been reported to not have any equivalent to profanity

In Japan, there’s no class of words deemed intrinsically offensive. *Baka* ‘fool’ or *chinchin* ‘wee-wee’ are about as bad as words get

In parts of Afghanistan, blasphemy is a capital crime

In France, *gros mots* “big words” aren’t so bad that they need to be bleeped
WHY YOU DON’T KNOW Dick
WHAT MAKES PROFANITY

A cultural belief that some words are bad (in some contexts).

That belief applied to specific words.
   – That are likely to be drawn from certain semantic fields
   – That may pattern together in sound

Cultural structures for reinforcing those norms (punishment, censorship, etc.)
Speech errors

Speech is peppered with errors

Errors may reflect otherwise unstated and repressed thought (Freud, 1901)

If these repressed thoughts are more likely to be about taboo topics than not, then speech errors should be more likely to result in taboo language than not.
Mean Speech Errors Per Participant

Motley et al., 1981; 1982

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Number of errors

<table>
<thead>
<tr>
<th>Version</th>
<th>Taboo</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>10</td>
<td>20</td>
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<tr>
<td>1982</td>
<td>10</td>
<td>60</td>
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</table>

Motley et al., 1981; 1982
Error-Free Taboo-Eliciting (hit shed) minus neutral pairs (hit said)

Right inferior frontal gyrus
(implicated in inhibitory control)

Severens et al., 2012
PICTURE-WORD INTERFERENCE
PICTURE-WORD INTERFERENCE

FUCK
PICTURE-WORD INTERFERENCE

Dhooge & Hartsuiker, 2011
LANGUAGE CENTERS OF THE BRAIN

Broca's Area

Wernicke's Area

Primary Auditory Cortex
“the most forceful oath of the tongue, which begins with an ‘f’ and which our Dictionaries have never dared to print”
Lordat, 1843
“E.C.'s attempts to reply to questions immediately after operation were totally unsuccessful. He would open his mouth and utter isolated words, and after apparently struggling to organize words for meaningful speech, recognized his inability and would utter expletives or short emotional phrases (e.g., 'Goddamit!'). Expletives and curses were well articulated and clearly understandable.”

Smith, 1966
“could not provide the correct expletive for situations described to him nor could he complete a curse”  

Speedie et al., 1993
COPROLALIA

Associated with Tourette Syndrome (10%-50% incidence)

Characteristic, attested phrases (Lancker & Cummings, 1999)

*fuck, shit, cunt, mother-fucker, prick, dick, cocksucker, nigger, cockey, bitch, pregnant-mother, bastard, tits, whore, fu . . . , doody, penis, queer, pussy, coitus, cock, ass, shi . . . , bowel movement, homosexual, screw, fag, faggot, schmuck, blow-me, wop, God damn it, damn fool, fuck my your, fucking, fucking. fucking. cunts, fuck, shit, ass, bitch, cock, fart, suck, you fucking idiot, asshole, fuck you, shit on you, fucka, fu . . .*

What brain mechanisms are impaired in Tourette Syndrome?
TWO VOCALIZATION PATHWAYS IN HUMANS

Ackermann, 2008
THANK YOU.